

The Kids' Times:

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Fin Whale



NMFS File Photo

The distinctive fin gives the whale its name.

How did the fin whale get its name?

The fin whale gets its name from the fin on its back that is near the tail. It is very easy to see. Other common names for the fin whale are Finback, Common Rorqual, and Razorback.

The scientific name, *Balaenoptera physalus*, has been translated in several ways. *Balaenoptera* means "winged whale." *Physalus* could mean "bellows" (see How do they behave?), "rorqual whale," or even "a kind of toad that puffs up."

What do they look like?

Fin whales are the second largest animals in size and weight after the blue whale. Adult males reach up to 79 feet in the **northern hemisphere** and 89 feet in the **southern hemisphere**. The females are slightly longer than the males, but both sexes weigh around 260,000lbs (120,000kg) or 130 tons. The whales grow this large from **calves** that are

19-21 feet long when they are born and weigh between 4,000 – 6,000 pounds (2-3 tons).

These whales are often described as **stream-lined**. Their long, sleek bodies have only small flippers and a prominent **dorsal fin** two-thirds of the way down the back. Their head is V-shaped and flat on top.

A fin whale is a **rorqual** and a **baleen** whale. Instead of teeth they have flat baleen plates made of a fingernail-like material called **kera-tin**. Each fin whale has between 260 and 480 pairs of baleen plates on each side of the mouth. They also have a series of 56-100 **ven-tral pleats** on their underside, running back from their lower jaw.

The coloring of a fin whale is very unique. Their bodies are light gray to brownish-black on the back and sides, while the underside is white. The coloring of the lower jaw is what makes the fin whale unique. The coloring is **asymmetrical**, meaning that each side is different. The whale's underside, right lip, and right baleen plate are yellow-white, while the main body, left lip, and left baleen plate are fairly uniform grey. The fin is **falcate** with a pointed tip, but can be variable in shape.



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The long, narrow body of the fin whale increases its swimming speed.

Behind the head, most individual fins have a chevron pattern and swirls ("blazes") on the right side of their head.

Where do they live?

Fin whales can be found in almost all the oceans of the world, but they prefer **temperate** and Arctic/Antarctic waters to **tropics**. The seasonal movements of the fin whale is complex because they can be found in both temperate and cold waters all year. Most migrate from the Arctic and Antarctic feeding areas in the summer to tropical breeding and calving areas in the winter. The location of winter breeding grounds is not known. Fin whales travel in the open seas, away from the coast, so they are difficult to track.



NMFS File Photo

The fin whale arches its back as it dives beneath the surface.

How long do they live?

Fin whales can live an extremely long time, at least 80 years.

What do they eat?

Fin whales feed on **zooplankton** species in all areas of the world. In the northern hemisphere eat small schooling fish, such as herring, capelin, and sand lance. In the Antarctic region, they primarily eat **krill**. Fin whales have an interesting way of feeding when they eat schooling fish. They lunge

into schools of fish with their mouths open. The fin whale may reach speeds up to 25 miles per hour when they lunge.

Like other baleen whales, the fin whale also skims the water and takes in huge volumes of water. When they close their mouths, the water is pushed out through the baleen and the prey is caught on the inside of the baleen. A fin whale eats up to two tons of food every day this way!

How do they behave?

Fin whales are usually found alone or in small groups. Any groupings are temporary and may last a few hours to a few days. Many fin whales can be found at once on feeding grounds, but they are not gathered in any kind of structure. Fin whales sometimes associate with blue whales.

Fin whales are among the fastest of the great whales. They can swim at bursts of speed up to 23 knots (approximately 29 miles per hour). They can also dive more than 700 feet deep.

Female fin whales can have calves when they are 6-10 years old. Generally, fin whales will mate during the winter, and a female carries her calf for approximately a year before giving birth the following winter. A female will give birth to one calf on average every 2-3 years. The calf will then nurse from its mother until it is approximately 12m (around 39'), which can be anywhere from 6-11 months.

What sounds do fin whales make and why?

Fin whales sounds have been studied and recorded more than those of most other whales. This is made somewhat easier by the fact that these animals are found in large groups more

often than some of the other whales and are easier to locate. That they interact socially in large groups may also increase their tendency to use sounds to communicate with one another. Fin whales produce splashing crashes when they **breach** and **pulses** when they move their jaws while feeding. They also emit a variety of grunts, moans, and pulsed communication vocalizations. The most common call they make are 1 second grunts that go from about 23 Hz down to 18 Hz (called "20-Hz downsweeps") that are repeated in different patterns throughout the year. These sequences can last over 15 minutes and be repeated over many hours and even days, but they are so low in frequency (pitch) that it would be hard for you to hear them. Fin whales in the Atlantic and Pacific Oceans both make the 20-Hz sounds, but the frequency sweep of whales in the Pacific are greater. People have heard these calls at long distances (125 miles) from calling fin whales. Recent studies have shown that only male fin whales make the loudest calls.

You can find fin whale sounds on the web at:

<http://birds.cornell.edu/brp/SoundsFinWhale.html> and

<http://www.pmel.noaa.gov/vents/acoustics/whales/whale-biology-fin.html>

(Contributed by Dr. Brandon Southall and Logan Southall)

Who are their predators?

Killer whales may attack young, ill, or very old fin whales. They are also susceptible to a parasite that can be fatal. Man's historical activities significantly decreased the number of fin whales.

How many fin whales are in the ocean?

The number of fin whales is determined by counting **stocks**. There is not accurate information for all stocks. Today, it is estimated there are approximately 2,700 fin whales in the North Atlantic and Gulf of Mexico and approximately 3,200 in the waters off of California, Oregon, and Washington (the eastern Pacific Ocean). The estimate for the entire North Pacific is between 14, 000 and 18,000 animals. The number of animals in the **southern hemisphere** is around 82,000 animals.

Why are they in trouble?

Originally, fin whales were not a target for **whalers** because of their speed and open ocean habitat. However, as whaling methods soon became more modern with steam powered ships and explosive harpoons, whalers over hunted other the **species** of whales they historically used for oil, bone, and fat. They then began to hunt fin whales, and killed a huge number of fin whales during the mid 1900s, 725,000 in the southern hemisphere alone. Today, fin whales may be threatened by ship collisions, entanglements in fishing gear, and human-made noise in the ocean.

What is being done to help them?

The fin whale was listed as endangered under the United States Endangered Species Act (ESA) in 1973 and is protected by the Marine Mammal Protection Act (MMPA). Endangered status applies to all fin whales in United States waters. Internationally, fin whales are classified as "protected stocks" by the International Whaling Commission (IWC), a regulatory group composed of nations from around the world. All of this protection means it is illegal to bother or hunt fin whales in the United States and in areas around the world.

Glossary:

Baleen: Overlapping plates made of keratin that hang from each side of the upper jaw of certain whales

Breach: A leap of a whale out of the water

Calf (calves): A very young, often newborn whale

Calving: The act of the birth of a whale

Dorsal fin: The main fin on the back of certain fishes or marine mammals

Falcate: Curved and tapering to a point

Keratin: Fingernail-like material

Krill: Small, shrimp-like creatures

Northern hemisphere: The half of the earth above the equator

Pulse: A single beat

Rorqual: A whale with grooves on the throat, running from the head to the tail, and with a small, pointed dorsal fin

Southern hemisphere: The half of the earth below the equator

Stock: A related group of animals

Streamlined: An animal whose body allows it to move through the water smoothly

Temperate: Not too hot or cold

Tropics: The area of the world between the Tropic of Capricorn and the Tropic of Cancer

Ventral pleats: Long indentations in the skin under the jaw that allow the mouth to expand to take in large amounts of water

Whaler: A person who hunts whales

Zooplankton: Floating, microscopic animals that live in the water



NOAA's National Marine Fisheries Service
Office of Protected Resources
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